



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,399	02/11/2002	Evgeny I. Rivin		3984
7590	03/26/2004		EXAMINER	
Evgeny I. Rivin 4227 Foxpointe Dr. West Bloomfield, MI 48323			BUTLER, DOUGLAS C	
			ART UNIT	PAPER NUMBER
				3683

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/073,399	RIVIN, EVGENY I.
	Examiner Douglas C. Butler	Art Unit 3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 September 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2-7 and 9-14 is/are pending in the application.

4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2,9-12 and 14 is/are rejected.

7) Claim(s) 7,13 is/are objected to under 37 CFR 1.75(c).

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

*Claims 1, 8 canceled.*

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

**DETAILED ACTION**

1. Claim 13 is objected to under 37CFR.75(c) improper dependent claim and has not been treated on the merits in that it depends on claims 10 and 11. Claim 7 depends on claim 13 and is thus included with claim 13. See MPEP 608.01(n).
2. Claims 1 and 8 have been canceled.
3. Claims 2-7, 9-14 are pending.
4. Applicant has elected Species D (Fig. 12) for prosecution without traverse. Claims 3-6 are withdrawn from consideration as not being readable on the elected species. 37CFR 1.142(b).
5. An action on the merits of independent claim 10 and dependent claims 2, 9, 11, 12 and 14 is included in this action. The examiner recognizes that applicant has numerous patents and pending applications and is therefore quite familiar with the patent examination process. Consider the undue breadth of at least claim 1 which is little more than a radially preloaded bushing. Claim 2 should be canceled since claim 2 seems to be redundant since its parent claim 10 recites the same subject matter at the last line of claim 10.

Claims 12 and 2 refer to "said streamlined rubber elements" which is present in claim 11 rather than in claim 10. Correction of the dependency of claims 12 and 2 should be effected.

6. For examination purposes, claims 2 and 12 are considered to be dependent on claim 11.

Art Unit: 3683

7. Claim 10 includes "at least one streamlined element" which is defined as including a variety of shapes such as a cylinder, torus, o-ring, sphere, etc., which definition is not limiting in any patentable sense.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 10, 2, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Werdich (4966386).

Fig. 1 of Werdich (386) discloses a bushing with a rigid inner sleeve 2, outer sleeve 5 coaxial with the inner sleeve 2, streamlined rubber elements 4 wherein the stiffness constant of the rubber elements 4 are changed by radial preloading in compression. See column 4, lines 4-15 of Werdich.

11. Claims 10, 2, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwerdt (5096166).

See column 1, lines 54-65 of Schwerdt wherein Schwerdt teaches changing the stiffness constants by compression preloading in the radial direction as well as varying

Art Unit: 3683

stiffness in other directions by preloading. Note streamlined elements 9, 11 with inner (1) and outer (3) sleeves.

12. Claims 2, 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwerdt (5031885).

Note streamlined bodies 4 of Schwerdt are under radial preload.

13. Claims 10, 2, 9, 11, 12, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by CH 0196108 to Auto Union.

Note pre-load application shoes at 5 of Figs. 1, 5, 6, 7 of Auto Union with inner (3) and outer (4) sleeves.

14. Claims 10, 2, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 60-85918 to Miura et al.

Fig. 5 of Miura et al discloses a plurality of streamlined rubber elements 23 between sleeves 29, 13 with stiffness changing means 25, 33 for preloading.

15. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Kingsley (6082721).

Kingsley discloses changing the stiffness of a streamlined element 24 by preloading in the radial direction as per column 6, lines 32-63.

16. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Kubaugh (2459741).

Note radial pre-loading means 30, 42 of Figs. 4-5 of Kubaugh, respectively.

17. Claims 2, 9, 10-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schell (3202410) or Rivin (5934653) in view of any one of the

Art Unit: 3683

secondary references to Rosenzweig (1734596) or Masury (1621676) or Gray (4403784) or Kubaugh (2459741).

Each one of the principal references discloses a plurality of streamlined rubber elements between sleeves but without the preloading means claimed in claim 10, last two lines.

Re Kubaugh, note preload means 30, 42 of Figs. 4, 5, respectively.

Rosenzweig (596) discloses preload or prestess means 37, 37', 50 of Figs. 1-7. Note the numerous preload means and their locations in Figs. 1-2 with Gray disclosing radial pre-loaders 50A, 50B in Fig. 4.

It would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to radially preload the bushings of Schell and Rivin (653) as taught by each of the secondary references with the number and position selected so as to provide the bushing user with the spring stiffness characteristics as desired based upon the particular environment intended to be used such as the automotive steering and suspension technologies, linkage arts, vibration isolation and dampening arts, jet engine, aircraft wing, vehicle underbody arts, etc. Bushings are used in technologies too numerous to mention.

18. Claims 2, 9-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosenzweig (596) or Masury (676).

See Figs. 1-7 of Rosenzweig and Figs. 1-2 of Masury.

19. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Pierce (5413374).

Pierce discloses an adjustable bushing with means (slit 26 and 28) for changing the stiffness of streamlined rubber element 22 by preloading in the radial direction. See column 7, lines 58-66.

20. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Thorn (4,899,997).

Bushing 10 of Figs. 1-2 of Thorn discloses streamlined element 26 with a stiffness that is changeable based upon radial preloading element 42 as per column 5, lines 45-66 and the last four lines of the Abstract thereof.

21. Although not specifically claimed, the arcuate pre-load shoes 905+ of instant Fig. 12 are similar to arcuate pre-load shoes shown in Figs. 1, 3, 25, etc., of Thiry (2950102).

22. Paton et al (4109934) is directed to the rubber "streamline" technology.

23. Note pre-loading shoes 117, 118 of Fig. 5 of Hirst et al (3242877).

24. Note pre-loading shoe 30 of Fig. 4 of Ogden (2910112) for radially compressing streamlined, rubber elements 32 which can be elongated.

25. Fig. 2 of Noehren et al (4244677) discloses a bushing preloaded or precompressed before installation as taught at column 3, lines 34-36.

26. Note preloading compression device 26 of Figs. 5-6 of Hindle (3897983) for changing the stiffness of streamlined rubber element 22.

27. Note compression preloading devices 140 for elastomeric bushings in, for example, Fig. 4a of Schmaling et al (5460487). See column 8, lines 41-44.

28. Note Hibyan (4859148) and its preloaded bushing.

Art Unit: 3683

29. Snodgrass (4893412) discloses a streamlined rubber element tacked or glued to a sleeve. See column 1, lines 65-67 of Snodgrass.
30. Note Rivin (2002/113349) cited to complete the record.
31. FR 2676784 discloses streamlined rubber elements 4 with axial preloading means 8.
32. Boggs (3494814) and Lammers (5033722) disclose preloaded bushings.
33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exmr. Butler whose telephone number is (703) 308-2575. The examiner can normally be reached on Monday to Friday from 5:30 a.m. to 2 p.m.

If attempts to reach the examiner by telephone are unsuccessful, ~~the examiner's~~ leave a message on the examiner's voicemail. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3683

Butler/vs  
March 15, 2004

DCBut 3/20/04  
DOUGLAS C. BUTLER  
PRIMARY EXAMINER  
AU3683